27 -

What is claimed is:

10

- 1. A binderless storage phosphor panel or screen comprising a vacuum deposited phosphor layer (1) of CsBr:Eu, wherein amounts of Eudopant are in the range of from 100 up to 400 p.p.m. versus CsBr, on a support (2) and wherein said support includes a layer of amorphous carbon (23).
- 2. A binderless storage phosphor panel or screen comprising a vacuum deposited phosphor layer (1) of CsBr:Eu, wherein amounts of Eudopant are in the range of from 100 up to 200 p.p.m. versus CsBr, on a support (2) and wherein said support includes a layer of amorphous carbon (23).
- 3. A binderless phosphor panel or screen according to claim 1, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.
- 4. A binderless phosphor panel or screen according to claim 2, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.
- 5. A binderless phosphor panel or screen according to claim 1, wherein 20 said support further includes a reflective auxiliary layer (22).

2003-10-06 10:42 am

GN03063

28 -

- 6. A binderless phosphor panel or screen according to claim 2, wherein said support further includes a reflective auxiliary layer (22).
- 7. A binderless phosphor panel or screen according to claim 3, wherein said support further includes a reflective auxiliary layer (22).
- 8. A binderless phosphor panel or screen according to claim 4, wherein said support further includes a reflective auxiliary layer (22).
 - 9. A binderless phosphor panel or screen according to claim 5, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2 μm and 200 μm .
- 10. A binderless phosphor panel or screen according to claim 6, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2 μm and 200 μm .
 - 11. A binderless phosphor panel or screen according to claim 7, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2 μm and 200 μm .

- 12. A binderless phosphor panel or screen according to claim 8, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2 μm and 200 μm .
- 13.A binderless phosphor panel or screen according to claim 5, wherein said support further includes a protective auxiliary layer (21) 20 between said reflective auxiliary layer and said phosphor layer.

- 14.A binderless phosphor panel or screen according to claim 6, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 15.A binderless phosphor panel or screen according to claim 7, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 16.A binderless phosphor panel or screen according to claim 8, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 17. A binderless phosphor panel or screen according to claim 9, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
 - 18.A binderless phosphor panel or screen according to claim 10, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
 - 19.A binderless phosphor panel or screen according to claim 11, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 20. A binderless phosphor panel or screen according to claim 12, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

- 21. A binderless phosphor panel or screen according to claim 13, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.
- 22.A binderless phosphor panel or screen according to claim 14, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.
- 23.A binderless phosphor panel or screen according to claim 15, wherein
 said protective auxiliary layer is a layer of parylene wherein said
 parylene is selected from the group consisting of parylene C,
 parylene D and parylene HT.
 - 24. A binderless phosphor panel or screen according to claim 16, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.
 - 25.A binderless phosphor panel or screen according to claim 17, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.
 - 26.A binderless phosphor panel or screen according to claim 18, wherein said protective auxiliary layer is a layer of parylene wherein said

15

parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

- 27. A binderless phosphor panel or screen according to claim 19, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.
- 28.A binderless phosphor panel or screen according to claim 20, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.
- 29. A method for producing a binderless storage phosphor panel comprising the steps of :
 - providing an amorphous carbon film,
 - vacuum depositing a storage phosphor layer of CsBr:Eu, wherein amounts of Eu-dopant are in the range of from 100 up to 400 p.p.m. versus CsBr, on said amorphous carbon film and, optionally,
 - laminating method a polymeric film on the side of the amorphous carbon film not covered by said phosphor.
- 30.A method for producing a binderless storage phosphor panel comprising the steps of :
 - providing an amorphous carbon film,
 - vacuum depositing a storage phosphor layer of CsBr:Eu, wherein amounts of Eu-dopant are in the range of from 100 up to 200 p.p.m.

10

versus CsBr, on said amorphous carbon film and, optionally,
- laminating method a polymeric film on the side of the amorphous
carbon film not covered by said phosphor.

- 31. A method according to claim 29, wherein before said step of vacuum depositing a storage phosphor layer on said amorphous carbon film a step of applying a specularly reflecting layer on said amorphous carbon film is included.
- 32. A method according to claim 30, wherein before said step of vacuum depositing a storage phosphor layer on said amorphous carbon film a step of applying a specularly reflecting layer on said amorphous carbon film is included.
 - 33. Use in mammography of a screen or panel according to claim 1.
 - 34. Use in mammography of a screen or panel according to claim 2.
 - 35. Use in mammography of a screen or panel according to claim 3.
- 36. Use in mammography of a screen or panel according to claim 4.
 - 37. Use in mammography of a screen or panel according to claim 5.
 - 38. Use in mammography of a screen or panel according to claim 6.
 - 39. Use in mammography of a screen or panel according to claim 7.

- 40. Use in mammography of a screen or panel according to claim 8.
- 41. Use in mammography of a screen or panel according to claim 9.
- 42. Use in mammography of a screen or panel according to claim 10.
- 43. Use in mammography of a screen or panel according to claim 11.
- 44. Use in mammography of a screen or panel according to claim 12.
 - 45. Use in mammography of a screen or panel according to claim 13.
 - 46. Use in mammography of a screen or panel according to claim 14.
 - 47. Use in mammography of a screen or panel according to claim 15.
 - 48. Use in mammography of a screen or panel according to claim 16.
- 49. Use in mammography of a screen or panel according to claim 17.
 - 50. Use in mammography of a screen or panel according to claim 18.
 - 51. Use in mammography of a screen or panel according to claim 19.
 - 52. Use in mammography of a screen or panel according to claim 20.
 - 53. Use in mammography of a screen or panel according to claim 21.
- 54. Use in mammography of a screen or panel according to claim 22.

- 55. Use in mammography of a screen or panel according to claim 23.
- 56. Use in mammography of a screen or panel according to claim 24.
- 57. Use in mammography of a screen or panel according to claim 25.
- 58. Use in mammography of a screen or panel according to claim 26.
- 5 59. Use in mammography of a screen or panel according to claim 27.
 - 60. Use in mammography of a screen or panel according to claim 28.